

Abstract 46

ANTERIOR SEGMENT ISCHEMIA FOLLOWING REPEATED VITRECTOMIES WITH EXTENSIVE CRYOTHERAPY AND LASER.

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Anterior segment ischaemia is a known complication of ocular procedures. It has been mainly described in association with strabismus surgery, scleral buckling or in predisposed individuals with retinopathy of prematurity or sickle cell disease. However, it is very unusual in an otherwise healthy individual with vitrectomy only. Here, we present such rare case.

It is a case report of a 47-year old male with history of 3 surgeries for retinal detachment (RD) in the left eye, including extensive retinectomy, laser and cryotherapy. The patient had no systemic conditions, like diabetes or sickle cell disease and scleral buckle has not been used in any of the surgeries. At presentation, vision was counting fingers, pressure 9mmHg, he had extensive neovascularization on the iris (NVI) and thickened posterior capsule. He underwent another vitrectomy with surgical capsulotomy, during which peripheral RD was noted, deemed the reason for NVI, and treated with additional laser, cryotherapy and SF6 tamponade.

Postoperatively he developed corneal oedema, inflammation, haemorrhage, mydriasis, and retinal detachment, requiring further surgery with silicone oil tamponade. Cornea became opaque, iris developed extensive complete atrophy; hypotony and low vision persisted, suggestive of anterior segment ischemia. Over time, the intraocular pressure improved somewhat - to 8mmHg, but the cornea remained opaque at last review.

Repeated vitrectomies with extensive laser and cryotherapy can lead to anterior segment ischaemia in rare cases. Suggested mechanism might involve impairment of the long ciliary arteries. Probably more conservative treatment and less invasive surgical approach should be advocated and extensive 360 laser and/or cryotherapy treatment should be avoided. Further evidence is needed to establish risk factors and pathology of this event.